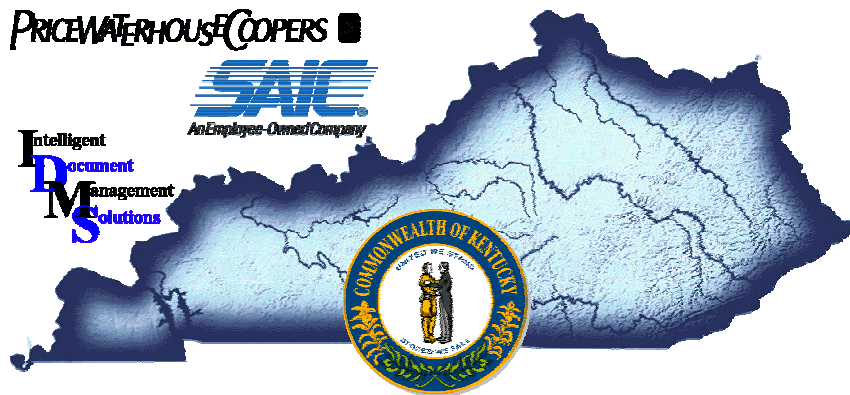


UCJIS STRATEGIC PLAN

Unified Criminal Justice Information System
Strategic Alliance Services Request
For the Commonwealth of Kentucky



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1.0 EXECUTIVE SUMMARY

1.1 Background

In the latter part of 2000, the Commonwealth of Kentucky selected a Project Team, consisting of Science Applications International Corporation (SAIC), PricewaterhouseCoopers (PwC), and Intelligent Document Management Solutions (IDMS), to develop a series of documents to plan the Commonwealth's multi-year evolution to a Unified Criminal Justice Information System (UCJIS). These documents address vision validation, strategic planning, implementation planning, and criminal history project planning. As illustrated in **Exhibit 1-1** these documents build upon each other providing increasing levels of detail. This document, the UCJIS Strategic Plan, builds upon the vision validation and presents the Commonwealth UCJIS goals, as well as a roadmap, initiatives, enablers, and risks at the strategic level.

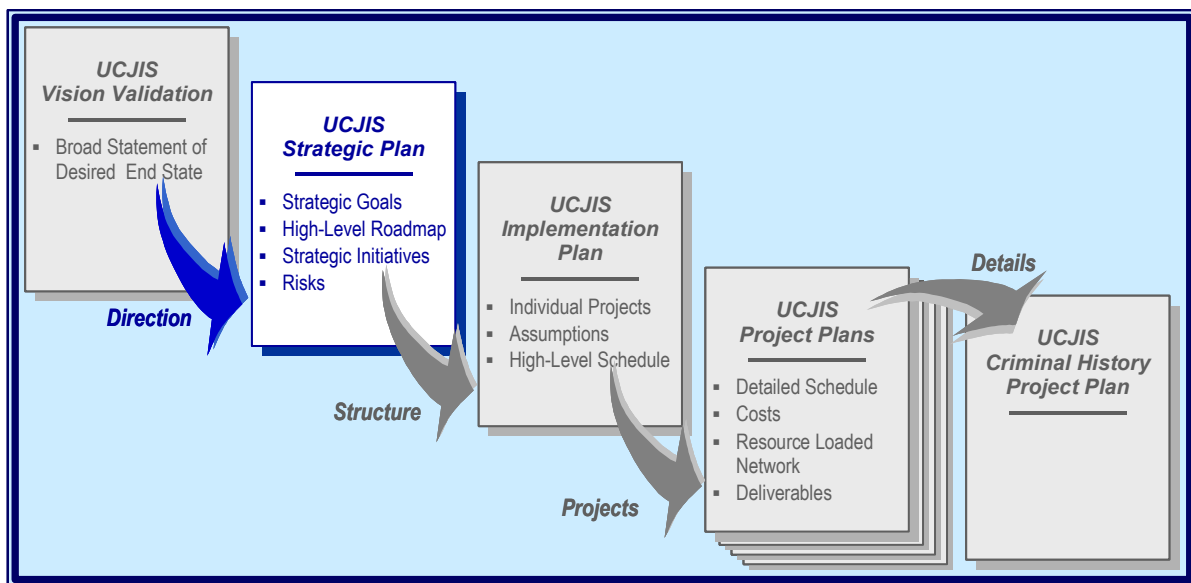


Exhibit 1-1: UCJIS Project Documents

This strategic plan stems from an initial 1998 effort culminating in the development of a vision for UCJIS. The Project Team revalidated this vision, further developing the vision objectives. As a result, the UCJIS Vision was formed. Over a period of several months, the Project Team conducted interviews with affected offices within the Commonwealth criminal justice system, observed processes and conducted independent research with the goal of producing an effective strategic plan flowing from the vision.

UCJIS Vision

The Commonwealth of Kentucky's Unified Criminal Justice Information System (UCJIS) is a singular, logical, flexible information system for trained justice professionals. It is built upon uniquely identified individuals and events and utilizes the most effective enterprise-wide business process, to electronically capture, and securely and responsibly disseminate, at the earliest opportunity, accurate and complete data in order to increase public safety.

The need to define the future of its UCJIS effort has never been more appropriate or important for the Commonwealth of Kentucky. Direction

from the Governor's Office as well as the legislature has made UCJIS a priority. Justice-related agencies throughout Kentucky are embarking on individual initiatives. As a result, these agencies often implement technology or business processes that may benefit the individual agency, but fail to recognize the needs of the entire Justice Community. If approached as a unified effort, these efforts could result in significantly enhanced technology, business processes, and benefits. The installation of a UCJIS Governance structure is key to the success of these multi-agency efforts. Furthermore, the US Department of Justice continues to focus on the integration of criminal justice related data on a national basis, thus opening national level doors for both financial and intellectual UCJIS resources for the Commonwealth.

To date, many UCJIS-related efforts, though beneficial, have focused on the incorporation of technology into agency-specific business processes. Although this can be of great benefit, too often excellent technology is not well understood, is implemented poorly, and receives minimal acceptance by the end-user.

The adoption of a well-founded, well-organized strategic plan will help the Commonwealth avoid these pitfalls and should result in a focused effort toward a single, integrated UCJIS for the Commonwealth of Kentucky. The Commonwealth must carefully consider its selection and use of the right type of technology. More specifically, it should define the direction for UCJIS-related technologies and define the path and process for how to determine the benefits of a custom developed application versus a commercial-off-the-shelf (COTS) application.

This Strategic Plan provides Kentucky with a high-level document that will enable the Commonwealth to move its justice and law enforcement entities forward, leveraging both processes and technology. It establishes the framework and defines the guiding principles by which the Commonwealth's Justice Community should work together to achieve their collective goals.

1.2 Strategic Goals

Building upon the objectives identified within the UCJIS Vision, the project team identified six Strategic Goals that formulate the basis of the UCJIS Strategic Plan. These goals align the Strategic Plan with the UCJIS vision, while maintaining the relationship between the broad thinking established within the vision and the insight applied within the strategic plan. Many factors drove the identification of the Strategic Goals, including:

- Innumerable data entry points for criminal justice information at all levels of the system
- Lack of an effective method to link information on an individual in the criminal justice system together by a single identifier
- Disjointed hardware/software architecture supporting the systems
- Vastly diverging capabilities to access the system across the state

Vision Objectives

- 1. Unique Identification*
- 2. Electronic Data Sharing*
- 3. A Singular, Logical Criminal History View*
- 4. Reduction of Redundant Data Entry Points*
- 5. Training*
- 6. Data Accuracy and Integrity*
- 7. Effective Enterprise-Wide Criminal Justice Business Process*
- 8. Data Access at Point of Need*
- 9. Appropriate Data Stewardship*
- 10. Extensible, Scalable and Interoperable Technology*
- 11. Access Authority*
- 12. Data Security*

- Business processes not focused on taking full advantage of the power and flexibility that a computerized criminal justice information system can provide

1.3 Strategic Initiatives and Enablers

During the process of identifying the goals, several areas were identified that required special attention. They have been categorized as *initiatives* and *enablers* (see box). The initiatives are efforts that must be done to ensure the success of the UCJIS Project. The enablers are typically projects that must be completed to allow several other parts of the UCJIS Project to proceed as recommended. These activities were all considered essential to goal accomplishment and as such were broken out for separate treatment. Of special note and of primary importance is the need for a viable governance structure to provide formal oversight and supervision to the UCJIS effort. The voluntary nature of the present system does not lend itself well to a successful UCJIS development in the long term. Formal structure is required for the UCJIS to move forward – and succeed.

Strategic Initiatives and Enablers

- ***Strategic Initiatives***
 - » *UCJIS Governance Structure and Mission Definition*
 - » *Wired and Wireless Infrastructure*
 - » *Information Sharing Architecture*
 - » *Business Process Reengineering*
- ***Strategic Enablers***
 - » *Computerized Criminal History*
 - » *Booking Process and e-Citation*
 - » *Warrants/Summons System*

1.4 UCJIS Architecture

Selection of the appropriate system architecture to support the UCJIS required in-depth interviews and observations conducted throughout the criminal justice system over a period of five months. The conclusion drawn was that three types of integrating architectures could be used to support UCJIS. Of the three, only one, called a full hybrid system, really provided the flexibility needed to support the myriad systems and complexities that make up the present criminal justice information system. It is called a full hybrid system since it is a combination of the two major systems. The hybrid architecture is characterized by two aspects which lend themselves well to Kentucky's diverse criminal justice information structure; a centralized controller that allows information to be exchanged among disparate computer systems, as well as providing a data source itself, and a centralized repository for cross-agency criminal history data. This great flexibility will provide Kentucky with the opportunity to maximize the return for its investment, without having to face the prospect of purchasing new, uniquely system compatible equipment throughout the state.

1.5 Risks

As with any undertaking of this magnitude, there are associated risks. These risks can, however, be reduced or kept in perspective primarily by ensuring players maintain an eye on the strategic goal rather than short-term tactical gratification. Risks come in four general areas: technical, scheduling, funding, and agency participation. A potential risk is the effect of technology. This great capability must be kept in perspective. Technology cannot be the driver to the solution. The solution must determine the technology employed. Additionally, there is some element of risk involved in the architecture since this particular approach has not been employed in other states. The technologies are, however, safe in either stand-alone mode or operating with each other, and have been successfully implemented in the private sector.

Schedule, funding, and technical risks are a concern, but no more so than with any other project. Maintaining a schedule that requires the cooperation of several agencies is difficult and can become frustrating. Continuous communications among all parties and a focus on the project schedule and potential impacts to it must be maintained with zeal. Funding is an ever-present risk. Building and following an accurate, realistic budget is elemental, and the ability to foresee potential pitfalls with the budget is essential.

1.6 Security

Confidentiality, integrity, and availability of government and corporate information assets are at higher risk now than ever before. There are several reasons for the increased risk, including:

- Technology levels in information systems continue to grow in complexity, resulting in the job of securing the Information Technology (IT) infrastructure being more difficult.
- Number of attacks on IT systems is increasing in complexity and frequency. As more individuals become computer literate, increasing numbers of unauthorized users will attempt to hack into networks or release new forms of malicious code into public domains.
- Security of information assets continually lags behind the technological advances of computer hardware, software, and Local Area Network (LAN) topologies. The need for an information security program is evident. However, quite often, security is an afterthought that is retrofitted into the infrastructure after an emergency or disaster has occurred.

1.7 Performance Measurement

A balanced scorecard approach has been recommended for performance measurement. This relatively new tool allows evaluation of performance beyond the traditional financial results. It provides an opportunity to include the effect of high-quality products and services, responsive and robust internal processes, and satisfied and loyal customers. The balanced scorecard approach is already in use within the Commonwealth; it is used in service level agreements with contractors.

1.8 Conclusion

The Commonwealth of Kentucky has established itself as a leader in the field of unified criminal justice. It has set in place a Vision that firmly defines and describes its UCJIS desires and objectives. With this Strategic Plan, it further defines itself as an entity that is serious about achieving those objectives.

One of Kentucky's primary and most significant challenges is the further maturation of its governance structure. The UCJIS governance body must be provided with the funding and authority to make the Commonwealth's plans a reality. It must now, throughout all agencies, commit the human and financial resources that will allow it to follow a systematic effort in implementing those tools and procedures that will ultimately result in an efficient UCJIS business process, supported by nearly seamless technology. Through this, the Commonwealth of Kentucky will achieve its goals and objectives, and all that participate in its effort will share in the success and benefits of a truly Unified Criminal Justice Information System.

2.0 STRATEGIC GOALS

The goals established in this strategic plan directly support the Vision Objectives and are the focal point for all UCJIS related efforts. These goals were synthesized from data gathered through several months of interviews and focus group discussions conducted by the Project Team throughout the current UCJIS environment. Participating agencies were the Office of the Attorney General (OAG), Commonwealth and County Attorneys, Jailers, Department of Corrections (DOC), Kentucky State Police (KSP), Administrative Office of the Courts (AOC), Court Clerks, Department of Juvenile Justice (DJJ), Governor's Office for Technology (GOT), Local and County Police Officials and Victims Advocates Office. In addition, the team performed a review of relevant data gathered from various sources within Kentucky, as well as information obtained from similar projects in other states and from various sources located on the Internet. The analysis of the information resulted in six strategic goals that added structure to the direction set in Vision. These goals, with a synopsis of their focus and a description of the current state, are presented below. **Exhibit 2-1** illustrates the high level relationship between the goals and the Vision Objectives they support.

Strategic Goals

- *Eliminate redundant efforts by establishing single points of data capture*
- *Improve the identification process by utilizing a unique, justice-wide identifier for all UCJIS related information*
- *Facilitate information sharing by creating a comprehensive justice-wide wired and wireless network*
- *Efficiently manage the collection and distribution of information by defining and installing a UCJIS architecture*
- *Enable key UCJIS processes by implementing mission critical applications*
- *Enhance processes and capture best-efforts by streamlining UCJIS business practices*

2.1 Eliminate Redundant Efforts by Establishing Single Points of Data Capture

Single points of data capture must be established wherever an individual enters the Kentucky Criminal Justice System. This data, once entered, should be available to all other UCJIS agencies and should not be re-entered as the individual moves within the system. UCJIS agencies should only have to add supplemental data that supports their specific business needs.

The current process is extremely labor intensive. Criminal data is obtained and entered at nearly every point in the process. The same data is repeatedly recorded and stored on each individual in stove-piped systems. The potential for error is considerable in a system that cannot tolerate administrative mistakes regarding individuals potentially involved in criminal activity. A typical example begins at the initial point of arrest. Data is captured at that point by the arresting officer on a hand-written citation and again on the officer's incident report. Much of the process is repeated following handoff to the Jail Management System (JMS). A copy of the citation is also forwarded to KSP for entry into the Criminal History System. As the subject moves through other UCJIS processes (AOC, DOC [or DJJ as appropriate]), data is continually re-entered into their respective systems. Should social work be required, the same data is re-entered yet again. These separate points of data capture need to be fully integrated to reduce the labor effort and provide an element of data integrity to the system.

Exhibit 2-1: Strategic Goals to Vision Objectives Comparison

Strategic Goals	Vision Objectives
Eliminate redundant efforts by establishing single points of data capture	<ul style="list-style-type: none"> • Reduction of Redundant Data Entry Points • Training • Data Accuracy and Integrity, Data Access at Point of Need • Appropriate Data Stewardship • Access Authority
Improve the identification process by utilizing a unique, Justice-wide identifier for all UCJIS related information	<ul style="list-style-type: none"> • Unique Identification • Electronic Data Sharing • A Single, Logical Criminal History View • Reduction of Redundant Data Entry Points • Training • Data Accuracy and Integrity
Facilitate information sharing by creating a Comprehensive Justice-wide wired and wireless network	<ul style="list-style-type: none"> • Electronic Data Sharing • Reduction of Redundant Data Entry Points • Training • Data Accuracy • Data Access at Point of Need • Extensible, Scalable, and Interoperable Technology • Access Authority • Data Security
Efficiently manage the collection and distribution of information by defining and installing a UCJIS architecture	<ul style="list-style-type: none"> • Unique Identification • Electronic Data Sharing • A Single, Logical Criminal History View • Reduction of Redundant Data Entry Points • Training • Data Accuracy • Effective Enterprise-wide Criminal Justice Business Process • Data Access at Point of Need • Appropriate Data Stewardship • Extensible, Scalable, and Interoperable Technology • Access Authority • Data Security
Enable key UCJIS processes by implementing mission critical applications	<ul style="list-style-type: none"> • Unique Identification • Electronic Data Sharing • A Single, Logical Criminal History View • Reduction of Redundant Data Entry Points • Training • Data Accuracy • Effective Enterprise-wide Criminal Justice Business Process • Data Access at Point of Need • Appropriate Data Stewardship • Extensible, Scalable, and Interoperable Technology • Access Authority • Data Security
Enhance process and capture best-effort by streamlining UCJIS business practices	<ul style="list-style-type: none"> • Electronic Data Sharing • A Single, Logical Criminal History View • Reduction of Redundant Data Entry Points • Training • Effective Enterprise-wide Criminal Justice Business Process

2.2 Improve the Identification Process by Utilizing a Unique, Justice-Wide Identifier for all UCJIS Related Information

Central to the idea of a unified system is a method by which any individual may be identified to the UCJIS through a single, unique identifier that will provide all agencies with a link between their own

data and that of other organizations. Through use of this method of identification, all justice system data on a single individual can be gathered in a unique file, identified by a unique number. A unique identifier already exists in the criminal justice system that could readily fill the bill. The State Identification number (SID) is a unique number, automatically generated by the Automated Fingerprint Identification System (AFIS). As AFIS classifies, compares, and matches fingerprints, any unique prints are assigned the specific, identification number, which remains with those prints permanently. Since this number is based on biometric dissimilarities and is well known throughout the criminal justice system, it would appear to be the perfect choice. Currently, with no common identifier for individuals in the criminal justice system, each agency maintains its own databases with unique systems that may or may not communicate with other agencies. While the employment of new systems is a positive first step, the goal now must be to stop fielding stove piped local independent systems in favor of a common, statewide information system capable of building, retaining and sharing data throughout the entire state criminal justice system. The adoption of an identifier, such as SID, is a positive step in bringing the systems together to better support all facets of the criminal justice process.

2.3 Facilitate Information Sharing by Creating a Comprehensive Justice-Wide Wired and Wireless Network

Law enforcement agencies must be able to obtain and share data with other like agencies and those at local, state, and federal levels. For the UCJIS to fully realize its potential in Kentucky, a communications/data exchange infrastructure must be created which fully embraces information requirements regardless of communications medium and operates at a high level of availability.

Currently some form of this capability exists at many levels. The Commonwealth has invested significant funds into the wired Kentucky Information Highway (KIH). Likewise, efforts are underway to enhance the wireless network to support the mobile data users. The cost of connectivity, however, remains high especially among the small, remote agency sites. It is critical that these locations be afforded cost effective connectivity inasmuch as this is the point where a significant number of criminals enter, or are managed within, the system. Since this situation will not likely change, a creative view must be taken toward providing communications services to these areas enabling them to participate more fully in the UCJIS system. The Commonwealth must position itself to take advantage of the rapidly developing information technology environment where costs for computing and communications continue downward while requests for information continue to spiral upward.

2.4 Efficiently Manage the Collection and Distribution of Information by Defining and Installing a UCJIS Architecture

Coinciding with the creation of the Commonwealth's UCJIS infrastructure is the equally important goal of establishing its system and data architecture. An UCJIS systems architecture must be put in place, which will provide for the capture, collection, storage, distribution and sharing of data to a wide variety of criminal justice users within the Commonwealth. This system must be at or near the state of the art technology, have open standards to accommodate change and update, and be flexible enough to accommodate a variety of user equipment. System availability must be at or near continuous to support pre-trial services needs, the officer on the beat/in the patrol car safety needs, and the needs of other criminal justice users.

Presently, there is no fully functional data sharing management environment within the Commonwealth. This deficiency has been noted through GOT's own studies. (Refer to the GOT web site at http://www.state.ky.us/kirm/arch_toc.htm for additional details.) The current environment

exists as a series of nearly isolated islands of information, some elements of which are collected many times and only occasionally shared through cumbersome resource intensive interfaces. The result is the capture of large amounts of valuable information, but with primitive or non-existent access, index and directory methods that hamper the use of the very information needed to aid public safety.

2.5 Enable Key UCJIS Processes by Implementing Mission Critical Applications

One of the Commonwealth's Strategic Goals must be the implementation of software applications that enable the business processes, support mission critical efforts and accomplish specific agency goals, such as Interstate Identification Index compliance. The software applications must be functionally rich, user friendly, and promote ease of data sharing.

Numerous legacy systems exist within agencies of the criminal justice system. These systems were designed to support what have now become outdated processes and are primarily for use within the individual agency. Very few were designed with UCJIS needs in mind. In the Computerized Criminal History area, for example, the criminal history provided for an individual may be only a partial history. This is due in part because AOC systems were not designed to mechanically feed disposition data to KSP.

Many organizations lack the basic automation tools needed for their job. The Commonwealth's and county attorneys rely on manual processes to manage their caseloads. There are very few tools available to them to enter, obtain, or share data via electronic means. With no prosecutorial Case Management System, the offices have resorted to the development of in-house systems and, in some cases, are still using manual ring-leaf notebook filing schemes.

The applications software tools are essential for tying the technical infrastructure, information sharing, process improvements, and productivity improvements together.

2.6 Enhance Processes and Capture Best-Efforts by Streamlining UCJIS Business Practices

To make business process more effective, an evaluation of those processes within the key individual agencies that comprise the UCJIS effort is required. An evaluation of the interrelated business processes that are key to sharing data and resources that will define the UCJIS process is also important. This examination should focus on identifying those processes that are labor intensive and inefficient.

As examples, DOC, through an effort by TRW, has identified many manual and redundant processes, paper-intensive procedures, stove-piped systems, and ad-hoc applications developed to assist specific business needs. The KSP have identified the need for improvement in the areas of records management, arrest and citation process, criminal history maintenance, fingerprinting and training. These Business Process Reengineering (BPR) efforts, as well as others, are essential to any new system development activities.

3.0 STRATEGIC INITIATIVES AND ENABLERS

Thus far, this document has defined the key goals for the Commonwealth’s UCJIS effort. This section recommends a sequence of efforts needed to lay the framework for success.

The areas that require the most and immediate attention consist of a series of both initiatives and enablers. The initiatives are large, critical efforts that will play a primary role in meeting one or more of the strategic goals. The enablers are shorter term, high visibility, and high impact projects that can affect several agencies and whose successful completion lays the groundwork for accomplishing a strategic goal. For example, putting the Computerized Criminal History effort in place contributes to the Information Sharing initiative supporting four of the strategic goals. These recommendations are logically phased to ensure that the efforts undertaken achieve the highest possible impacts. While they may appear to have a definite beginning and ending, it is the end state that is important more so than the actual end of the project itself. More importantly are the beginnings since it is upon those beginnings that the remainder of the plan is built. In the first year, many recommendations are designed to be of the quick win nature. Rapid success will demonstrate to legislators, agencies and resource managers alike that the UCJIS project is underway and making headway. In addition, these initial efforts lay the foundation for future initiatives. A staggered course of action that spans three distinct phases was chosen to maximize efforts across the board. A discussion at the end of this section is designed to provide points to consider regarding the future of UCJIS in Kentucky. Technology moves forward and the criminal justice system must be prepared to take advantage of the opportunities these technologies will bring. **Exhibit 3-1** shows the Strategic Phasing Timeline.

Year 1	Years 2 through 5				Year 5 and Beyond		
UCJIS Governance							
Planning							
Early Successes							
Business Process Reengineering							
Key Initial Projects							
		Infrastructure and Architecture					
		Training, Change Management, and Performance Measures					
				Finalize Implementations			
				Reevaluation of Strategic Plan			
				Future Technologies			
				Transition to Sustaining Operations			

Exhibit 3-1: Strategic Phasing Timeline

3.1 Strategic Initiatives and Enablers

Exhibit 3-2 illustrates the significance of the initiatives and their relationship to multiple UCJIS Strategic Goals. Each of these initiatives and enablers is discussed in detail in the following sections.

Exhibit 3-2: Strategic Initiatives/Enablers to Strategic Goals Matrix

Strategic Initiatives/Enablers	Strategic Goals
UCJIS Governance Structure and Mission Definition	<ul style="list-style-type: none"> • Implement mission critical applications • Streamline UCJIS business practices
Wired and Wireless Infrastructure	<ul style="list-style-type: none"> • Eliminate redundant data gathering efforts • Facilitate information sharing • Manage the collection and distribution of information • Enhance processes and capture best-efforts
Information Sharing Architecture	<ul style="list-style-type: none"> • Eliminate redundant data gathering efforts • Facilitate information sharing • Manage the collection and distribution of information • Enhance processes and capture best-efforts
Business Process Reengineering	<ul style="list-style-type: none"> • Eliminate redundant data gathering efforts • Implement mission critical applications • Streamline UCJIS business practices
Computerized Criminal History	<ul style="list-style-type: none"> • Eliminate redundant data gathering effort • Facilitate information sharing • Implement mission critical applications • Streamline UCJIS business practices
Booking Process and e-Citation	<ul style="list-style-type: none"> • Eliminate redundant data gathering efforts • Improve the identification process • Facilitate information sharing • Implement mission critical applications • Enhance processes and capture best-efforts
Warrants/Summons System	<ul style="list-style-type: none"> • Eliminate redundant data gathering efforts • Facilitate information sharing • Implement mission critical applications • Enhance processes and capture best-efforts

3.1.1 Strategic Initiatives

Strategic initiatives are the critical efforts needed to achieve the Strategic Goals of the Commonwealth and to support the UCJIS Vision. They are critical or large-scale, multiyear efforts that position the Commonwealth's Justice Community for the future. Because of their impact, they require immediate attention. These initiatives will very likely play a significant role in the UCJIS Project's success or failure.

3.1.1.1 UCJIS Governance Structure and Mission Definition

Perhaps the single most important initiative for the Commonwealth is the establishment of a fully functional UCJIS Governance Structure, and a clear definition of the UCJIS mission. Without a governing body, empowered by a formal policy statement, an effort that crosses so many formal and informal boundaries is doomed to fail. The current structure relies on personal relationships and the willingness of professionals to do the right thing for the common good. While admirable and workable in the past, personnel and priorities change. This approach cannot survive in an environment where major programmatic decisions are required to bring the UCJIS effort to fruition for the Commonwealth. These decisions may not affect all agencies equally. A governing board must be put in place to provide leadership and momentum to the effort while acting as a sounding board for questions and concerns from involved agencies.

Currently, the organizations involved in UCJIS have informal roles and responsibilities. However, a formal separation exists among the branches of government: Judicial Branch, Executive Branch, and Legislative Branch. Though each plays a critical role in the success of the UCJIS effort, each also has an internal agenda and ownership that is focused on the individual agencies that reside under their

respective jurisdictions. A UCJIS Governance Office must bridge these individual agendas and be the primary authority controlling decisions and budgetary approvals.

The City of San Diego has quite successfully developed a UCJIS department that provides the oversight and management of all UCJIS related activities and goals. Likewise, the states of North Carolina and New Jersey have a UCJIS department or group that not only champions all UCJIS related activities, but also has centralized all UCJIS related budgets. Therefore, entities requesting the allocation of funds that are for the purchase of UCJIS related products or services must first obtain approval by the UCJIS department, which manages these budgets.

Any designated UCJIS Governance group must have authority similar to that above and have direct or dotted line reporting responsibilities to executive management that spans all key government branches. This can be accomplished through Memorandums of Understanding/Agreement or Inter-Agency Agreements. An enhancement to the current Kentucky UCJIS committee is recommended with an operational structure with accountability and authority to implement changes. A full-time UCJIS Office would effectively coordinate efforts on a daily basis. An Integrated Project Team (IPT) comprised of members from each participating agency and with the authorities as stated above is one approach. The members meet regularly to review progress on the program and advise executive management on relevant issues. Because the IPT is involved throughout the life of the program, it becomes easier to implement the various parts of the program. Change management is easier since the involved agencies make up the IPT and have had input into the program discussions and decisions. It must have a full-time staff to adequately support the multitude of UCJIS projects and efforts being undertaken. It must also be able to mediate discussion among member agencies. The IPT would be the authority to review and approve UCJIS and UCJIS-related efforts. Member agencies must agree to the findings and proposed actions of the IPT by majority. Without such action, individual agencies throughout the Commonwealth will not relinquish authority to the UCJIS efforts. This will continue to exhaust personnel, physical and financial resources in efforts that will not benefit the total UCJIS or may not be aligned with UCJIS Strategy. It is of paramount importance that IPT members are forward looking strategic thinkers dedicated to solving the Commonwealth's Justice Information issues, rather than solely and distinctly focused on a single organization or entity. A global, justice-wide focus should be the primary requirement for membership on this team.

3.1.1.2 Wired and Wireless Infrastructure

A key component of a successful UCJIS is the ability for member agencies to communicate effectively. The Commonwealth must undertake over the course of the next several years the implementation of a Commonwealth-wide wired and wireless infrastructure. Kentucky has made significant progress through the introduction of the KIH. The current wired network, however, does not provide cost-effective connectivity for the tier two UCJIS agencies that reside at the county and local level.

Similarly, the existing voice-based wireless infrastructure is not readily expandable to serve the growing data communications needs of its consumers, most notably those at the tip of the spear – the police officer in the cruiser or on the street. In many states, wireless data connectivity has become the lifeblood of the public safety officials.

The most significant critical success factor and performance measure in this area will be infrastructure access. Given the need in all agencies, but specifically in public and officer safety, infrastructure up time must be near continuous. Required levels of redundancy in critical information distribution networks must be designed into the infrastructure. A completely functional Commonwealth-wide infrastructure that provides faultless availability in both wired and especially wireless connectivity is critical to the success of the entire program.

To this end, steps should be taken early on to address this major area of need. A team from across the Commonwealth, with vested interest in this effort, should be brought together to develop and flesh out a plan to implement this infrastructure.

3.1.1.3 Information Sharing Architecture

As the infrastructure is rolled out to connect all UCJIS agencies, the Commonwealth must also implement a data management structure for efficient use, capture, and distribution of information. The development of the UCJIS information sharing architecture facilitates a structured, technically enabled environment to control the collection, distribution, access, security, and integrity of the shared data. The UCJIS Architecture will move the present environment away from the point-to-point direct interface environment that no longer supports the UCJIS universe as it continues to expand. A full hybrid architecture featuring document exchange, as described in Section 4, will provide for much greater ease of information sharing than traditional point-to-point interfaces. It should be clearly understood that point-to-point information exchange that is deemed necessary will remain in place and will compliment document exchange that is the future architecture for information movement and management throughout the Commonwealth. A key component of the architecture will be the mapping of information into forms that will pass through the exchange architecture. This will provide the structure necessary for the Commonwealth's Justice Community to share needed data as seamlessly as possible.

3.1.1.4 Business Process Reengineering

Organizations are dynamic entities whose constant evolution must be recognized. In most cases, businesses have become functional in nature, i.e., business is accomplished with processes that are often at different stages of development and capability and operate in an overly complicated manner. Furthermore, they do not work toward common objectives, either agency-specific or UCJIS-wide. It is not unusual that the internal structure and business processes do not comprehensively address customer needs in the most effective manner.¹ BPR initiatives redefine end-to-end business procedures to match or exceed customer needs. They adapt and develop the individual building blocks of these processes, such as information technology, organizational structure, and human resources, and complete the implementation of change within a short time-scale. The Project Team proposes an enterprise-wide BPR effort for UCJIS as well as for the individual justice agencies.

3.1.2 Strategic Enablers

Along with the Strategic Initiatives, the Project Team has identified several key efforts that are considered Strategic Enablers. These efforts are considered strategic enablers because they are projects that affect several key agencies, support the accomplishment of several strategic goals, and help satisfy a number of vision objectives. They are considered key as they house data that is vital to the majority of agencies within the Commonwealth's Justice Community or they provide for significant business process improvement affecting several key agencies and business processes. They are so critical to the success of the effort that by not making them a priority may increase the risk and prevent the Strategic Effort's overall success. These projects require attention at the highest levels within the Commonwealth.

3.1.2.1 Computerized Criminal History

The Commonwealth's Justice Community has repeatedly emphasized its need for a single, logical criminal history view. The Computerized Criminal History (CCH) Project – Phase I will serve as a

¹ The use of *customer* implies both internal and external customers, agency personnel, and Commonwealth citizenry

starting point for replacing the current Criminal History Records Information System (CHRIS). The key tasks being considered for Phase I are as follows:

- Core CCH Replacement
- AFIS – CCH Interface
- AFIS – AOC Interface

Key tasks that may be worked in parallel to Phase I, but that may not be completed during the phase are the Data Conversion Project and the Interstate Identification Project Participation Pilot. The scope of this phase is subject to further analysis and definition in the Computerized Criminal History Project – Phase 1 being developed under UCJIS Task 4. In addition, it is anticipated the replacement system will be more in-line with current technology, i.e., client/server, Relational Database Management System (RDBMS), etc.

3.1.2.2 Booking Process and e-Citation

The Project Team delivered a White Paper identifying key areas for improvement in the booking process on January 24, 2001. Among the recommendations were:

- Capture key data electronically at the beginning of the justice process and facilitating data capture by the early introduction of Mobile Data Terminals (MDT)/Mobile Computing Device (MCD) wireless technologies²
- Obtain buy-in from the key agencies within the UCJIS arena
- Streamline the significantly redundant business processes
- Become zealous about the importance of information sharing
- Examine the feasibility of using the SID as a unique identifier
- Approach the process from the jailer centric viewpoint and have it occur entirely from the jail

Following these suggestions will begin to streamline the entire process by simplifying and collating data entry requirements on the front end of the system. With these recommendations in place, the baseline is formed for the remainder of the UCJIS project in that they contribute heavily to two of the strategic goals and address multiple Vision Objectives. This project should commence as soon as practically feasible.

3.1.2.3 Warrants/Summons System

One of the more difficult and time consuming tasks identified in several data gathering sessions was the creation and processing of warrants and summons. Warrants are difficult to get authorized and delivered to the serving Law Enforcement Agency (LEA). The existing warrants and summons process is time consuming, paper intensive and not supported by enabling technology. Additionally, it can occur at any time of day or night, resulting in the need to locate the key personnel needed to institute the process. Finally, the tracking of open warrants is cumbersome and, again, not supported by efficient, shared technology. This results in open warrants that cannot be seen by LEAs not connected to a shared environment. The institution of a warrants/summons system will allow those involved in the warrants and summons process to create, authorize (sign), and deliver warrants and summons through an electronic environment. Further, open warrants and summons will be accessible through the UCJIS information architecture for search by all criminal justice agencies.

² Until MDTs/MCDs are readily available, as an interim solution, the Project Team recommended development of an automated citation system that will run on a personal computer. This PC application would provide for the capture and printing of the citation information and the direct interface of this information into the JMS and live-scan/AFIS.

3.2 Strategic Phases

3.2.1 Phase I – Set Up

The first year of the UCJIS Strategic Implementation focuses on positioning the Commonwealth for the long-term projects. The Strategic Plan makes recommendations focused on setting things up, while at the same time allowing for some early accomplishments. Phase I, therefore, blends planning organization, training, change management, and performance measure planning, with initial success.

3.2.1.1 Planning and Organization

Several forms of planning need to occur during the first phase of the UCJIS Strategic Implementation. Many UCJIS agencies have not had the opportunity to formulate the basic plans needed to establish objectives and achieve organizational goals. These include an agency business/operations plan and an IT Strategic Plan. This handicaps their long-term planning capabilities affecting the integrity of budgets and allocation of resources.

In addition, agencies will need to formulate project teams and immediately begin the planning efforts for the minor and major strategy related projects. The Commonwealth will need to evaluate the UCJIS Implementation Plan. This plan will require detailed analysis to determine the level and types of planning that it will require given the number and complexity of many of the efforts defined within the Implementation Plan. Following typical project methodology, the Commonwealth will need to organize its financial and human resources to determine the level of effort required by internal and external staff to ensure successful completion. The Implementation Plan will include agency specific projects that can be undertaken either independently or in tandem with other projects. Since these projects can be interdependent among agencies, care in planning should be taken to ensure links between/among these projects are clearly defined and well understood. A systematic approach, wherein all participants have a good understanding of all the projects and how their parts interplay in the whole should be undertaken. Where, how, and to what extent the interdependencies play will be critical to ensuring both a well-managed and labor efficient effort. The employment of a PERT or Gantt chart in mapping out these projects and developing a completion strategy would be most helpful in clearly illustrating the best path to completion.

As discussed at the outset of this section, perhaps the most important effort to be undertaken by the Commonwealth would be the formal implementation of a UCJIS Governance Structure. Although previously described as a Strategic Initiative, it is one of the first projects that the Commonwealth must undertake to ensure the success of the UCJIS effort. The development of the governance structure would include the installation of an IPT, to include key personnel that would govern all aspects of the UCJIS Strategic Implementation including authorization of projects and control of funds and resources. Development of the UCJIS Governance Structure should include the hiring of additional resources to assist the UCJIS Project Manager in project management, administration and control, as well as problem and issue resolution.

3.2.1.2 Training, Change Management, and Performance Measures

Stakeholders have targeted training as one of the strategic objectives within the vision. Personnel who are comfortable with technology are personnel who effectively use that technology. The Commonwealth will need to consider training a short and long-term priority. Training would begin initially as a key priority to bring many of the Justice Community staff up to speed on current technologies. Proficiency training such as initial and refresher instruction for the jailers on the live-scan fingerprint system would also be in the first phase. Training would continue through all phases

covering such items as BPR procedural training because of process enhancements or technology training for new applications such as a Records Management System or Computer Aided Dispatch.

Like training, it is equally important for the UCJIS effort to begin its Change Management effort immediately. Change Management involves all aspects of managing the expectations and fears of change. It includes efforts such as the building of web sites and publishing of information. Change Management addresses the need to define a fully integrated training plan that incorporates the needs of all levels of personnel within the UCJIS effort and the training they require. Change Management also includes a significant amount of communication and expectation setting. Given that a strategic approach often does not meet time expectations of stakeholders in a project, thorough and frequent communications to stakeholders not privy to project specifics will be required.

An organizational transition plan helps make implementation of major operational changes successful through building people's understanding of and commitment to changes associated with the implementation, identifying key levers for change (leadership, communication, training, rewards and recognition), and enabling continuous improvement to sustain change. All too often, IT and process migration efforts of this type fail due to a lack of adequate attention to subjective issues such as:

- End-user perception and buy-in
- Leadership commitment
- Potential staffing realignment
- External and internal politics
- Potential budget realignment
- Perceptions of power
- Definition of the compelling reasons for change

Finally, it will be important for the UCJIS effort to begin to organize and define its Performance Measurement process at the beginning of the initial phase. Initial phase efforts would include the organization of the Performance Measurement Plan, the defining of the various data collection processes and the collection of baseline data. Performance Measurement would continue through all phases of the Strategic Implementation Effort. Information would continue to be collected, new efforts would be implemented requiring individual Performance Measurement Plans, and results would be monitored, resulting in Performance Analysis and process adjustment based upon results.

3.2.1.3 Early Successes

Early Successes refers to what are commonly known as quick wins. These relatively high-impact, low-cost projects can be implemented in six months or less. These recommendations were developed in the course of stakeholder interviews, site visits, internal document reviews, and independent research. Early Successes allow not only the completion of initial key initiatives that are short in duration, but also potentially strategic in nature. By initializing and implementing these projects, the Commonwealth will realize early success and will begin to set the pace and tone for the remainder of the UCJIS Strategic Implementation. If implemented correctly, all will have far-reaching impact on UCJIS. Specifics on each quick win can be found in the Implementation Plan.

3.2.2 Phase II – Development

During this phase, which may last through year five or longer depending on the particular projects involved, the UCJIS project will be building and expanding on the achievements of the first year. It is during this time that stakeholders begin to observe statewide benefits. Business Process Reengineering tasks continue, while many key projects are well underway. The Commonwealth now begins to turn its focus on positioning its internal infrastructure to support the UCJIS Architecture.

3.2.2.1 Infrastructure

In concert with the implementation of the Criminal History System, the UCJIS project also begins to fortify its infrastructure through efforts focused on expanding its wired and wireless network infrastructure. The wired infrastructure now begins to take on the initial configuration needed to share Criminal History data with key UCJIS agencies. Eventually, this infrastructure matures and integrates into the fully functional Document Exchange Architecture (DXA) environment as illustrated in Section 4 of this Strategic Plan.

The wireless portion of the infrastructure will be especially critical to the success of the overall UCJIS effort. It is that part which will enable the entire UCJIS system to provide real-time or near real-time support directly to the trooper or local law enforcement officers in a car or in the field. Officers will be able to tailor their information requirements to their needs and have the confidence that any information available to the Commonwealth of Kentucky within the UCJIS environment is available to them at their point of need.

3.2.2.2 Architecture

The recommended conceptual architecture is discussed in detail in Section 4 of this document. DXA is based on the fact that each instance of governmental information sharing involves two sharing entities. The holder entity is always a governmental unit; the receiver entity may be a governmental entity or a private entity (e.g., private attorney, day care center or private citizen). Phase II will include the development of an enterprise wide data model, the definition of the forms, the configuration of the data repository and numerous other infrastructure improvements. These efforts will lead to a fully integrated DXA environment.

3.2.2.3 Performance Measurement Activation

The performance metrics are implemented enterprise-wide at this step; all appropriate business processes are being measured. This entails the initiation of performance measurement reporting, whether manual or automated, and ongoing critical review of the reported results. The reports are produced on a predetermined schedule, and are interpreted in terms of trends, which may then be used as prescriptions for continuous improvement of the processes.

3.2.3 Phase III – Sustaining Operations and Future State

With the rapid evolution of technology, the future is often described in terms of “web years.” What is not feasible today is an absolute necessity tomorrow. Below are a few practices that are gaining momentum in the integrated criminal justice universe. As the UCJIS effort moves beyond the core efforts completed within the first several years, it will finalize the introduction of key technologies and inaugurate others that are now ready for introduction. Additionally, the Commonwealth will begin the transition from implementing information systems to supporting them.

3.2.3.1 Finalizing Implementations

During this phase, many of the initiatives and efforts started during Phase II will begin to wind down toward completion. The UCJIS effort now enters an era of realization of its efforts. Some of the projects begun during years two and three are now beginning to show the fruits of their efforts. Projects enter their testing, training, transition to operations and implementation phases

One of the most significant efforts during this phase is the transition of the numerous implementation efforts as they are completed to a sustaining operations effort. This group of efforts will involve a significant amount of planning and resource allocation.

3.2.3.2 Reevaluation of Strategic Plan

The Strategic Plan is a living document and as such maintains its viability and vibrancy through periodic review and revalidation. The basic tenets of the plan should not change, but the manner in which one arrives at the goals may well improve with improved knowledge and coordination within the UCJIS system. New key initiatives or enablers may be identified. Old ones may be revamped or discarded. New technology spawns new ideas and approaches to problem solving. This process should take place at least tri-annually, or at a reasonable place in the overall process that would provide the greatest benefit to the overall direction of UCJIS.

3.2.3.3 Plan for Future Technologies

The Commonwealth will attain a high degree of sophistication in criminal justice information technology during the implementation of UCJIS. As UCJIS matures, an eye must be kept on the direction and speed of technological trends and developments that may enhance the system as a whole. Technology today advances rapidly and can bypass the unwary very quickly. The key is to follow the trends and be in a position to take advantage of opportunities as they arise, or as they are desired. Maintaining state of the art technology is not the goal, but keeping on the track of the right technological trends is. Below are listed specific areas that are important for the Commonwealth to remain abreast of the changes in technology over the next few years.

3.2.3.3.1 Biometrics

- » *Facial Recognition Software* – Facial recognition software is used to identify people based on their facial features. This can be a powerful law enforcement tool to aid in identifying people in pictures (mug shots), creating photo line-ups, etc. Attention on this technology should focus on advances that would allow this area of technology to take on more of a positive identification capability.
- » *Mobile Fingerprinting* – Unlike the current fingerprinting processes, where offenders must be transported to a location to be fingerprinted, mobile fingerprinting machines will enable anytime, anywhere fingerprinting capability. This will dramatically increase the positive identification of individuals as well as move forward the classification and identification processes. In line with the strategic goal of capturing the data at the earliest source, the implementation of this process and technology provides for the capture of subject identification information at the first point of contact. The areas to watch in this technology will be determined by where the Federal Bureau of Investigation (FBI) moves. That is, if the FBI moves to a flat print matching capability then the growth of mobile fingerprinting capability will probably take a major leap forward. The alternative could also be a rapid advance in technology that would allow lower cost, high quality, rolled prints in the field.
- » *Retinal/Iris Scanning (Ophthalmic Imaging)* – The blood vessel patterns of the retina combined with the pattern of flecks on the iris offer a unique method of identification. Attention in this area should focus on changes in the technology that would tend to make this process more acceptable to the larger criminal justice community.
- » *DNA Fingerprinting* – DNA is a human substance that contains the basis of genetic material within cells. Each human being has a nearly distinct pattern of this material that can be detected and used for identification purposes. This method is currently in use, but it is presently cost prohibitive to employ on a widespread or tactical basis. The important changes in technology to focus on in this area are those that would lead to the ability to rapidly conduct a DNA analysis in the field and run those results against a large database.

3.2.3.3.2 Communications

- » *Wireless LANs* – One of the key limitations to mobile computing is communications bandwidth between the host and the mobile data terminal. Advancements are underway that significantly increases the data transfer rates available. Initially, this technology will take the form of a local wireless LAN that would allow the law enforcement official to drive to pre-determined wireless LAN areas that allow up to 10MBPS data transfers between the mobile unit and the host. This could allow rapid software and map/ Geographical Information Systems (GIS) updates without the need to remove the unit from the car. Watch closely for technologies that provide this capability via the public safety wireless data network anytime or anywhere.
- » *Satellite* – Satellite communications is rapidly becoming a viable means of communication particularly in areas where radio coverage is poor. This form of communications is particularly effective for broadcasting data from a single source to multiple users such as a dispersed police force. Technology that makes this a viable alternative to trunk radio, cell phones, and other wireless modes of communications should be watched closely.
- » *Personal Computing Devices (PCDs)* – As PCDs increase in capacity, functionality, and ease of use, the technology employed in the Palm Pilot will become further integrated with technologies applicable for field use. Eventually a PCD will incorporate all of the functionally rich features including communications, Global Positioning System (GPS), and the memory/storage capacity necessary for the officer to perform all of the information receipt, capture and transmission duties from such a device. Watch for the advancements in this technology area to provide for an easier and more robust approach to mobile computing in public safety vehicles.
- » *Multi-State Data Sharing* – As states progress in their implementation for Integrated/Unified Criminal Justice Information Systems, opportunities will arise that will allow adjacent states to start to share more and more data. The Integrated Justice Information System Industry Working Group (IJISIWG) and The National Association of State Chief Information Officers (NASCIO) are organizations actively pursuing common standards for information sharing. Watch for the establishment of a widely accepted standard architecture for this area. Once some degree of standardization is established, the next move is likely to be toward more data sharing.
- » *Software Defined Radios* – Currently the military is attempting to acquire a family of affordable, high capacity, tactical radios to provide interoperability across various frequencies and waveform standards. Similar efforts are under study through the Public Safety Wireless Advisory Committee (PSWAC). As the technology evolves and costs decrease, watch for devices that can share information among the Police, Fire, and Emergency Medical Service (EMS) agencies.

4.0 STRATEGIC ARCHITECTURE

Architecture, at the level of Information Technology Strategy settles the issue of how the enterprise will look, cast in terms of the fundamental components of information solutions. It is as much about how these components fit together as about what an individual piece does. The focus of information system design has shifted to perfecting the connectivity and cooperative mechanisms that will permit many applications to act in concert. Architecture, in effect, defines the enterprise system.

A technical architecture describes an information system using models. It defines how Information Technology will be effectively applied to the task of achieving strategic process efficiency.

The technology architecture consists of a framework that outlines how technologies plug and play with one another in a series of platform layers. It is important to prudently manage the diversity of technology so that it only occurs when there is a specific, justified business process requirement. The implementation of an architecture that enables the efficient sharing of information among broad audiences does not preclude retention of direct agency-to-agency data sharing that have strong communities of interest. The following principles were taken into consideration as the Kentucky UCJIS Architecture evolved.

Architecture, at the level of Information Technology...settles the issue of how the enterprise will look, cast in terms of the fundamental components of information solutions.

4.1 Architecture/Information Technology Guiding Principles

The following principles are key statements of direction related to information technology and its ability to serve as an enabler to meet the needs and goals of the Commonwealth Justice agencies. These guiding principles are intended to provide an environment in which the Commonwealth Justice agencies can achieve their objectives related to providing high-level customer service. The principles are interrelated and meant to provide a cohesive approach to IT. While objectives and strategies are defined for each principle, they must be viewed within the context of the total environment described in this section of the plan.

- Support the business objectives of the Commonwealth Justice Agencies
- Conduct Commonwealth business electronically
- Treat information as a strategic resource
- View technology investments from an enterprise perspective
- Ensure electronic access to information and services while maintaining privacy

4.1.1 Principle 1: Support the Business Objectives of the Commonwealth Justice Agencies

The primary role of information technology is to support the business objectives of the Commonwealth. Information technology can enable improvements in business processes including reduction of costs and cycle times. Technology has a limited value when not applied to the business objectives and goals of the organization. IT planning, budgeting and management must be closely integrated with the business planning, development, and management to ensure that IT is being applied effectively and efficiently.

4.1.2 Principle 2: Conduct Commonwealth Business Electronically

Commonwealth Justice agencies' business can frequently be transacted more efficiently and effectively utilizing information technology to support the process. Electronic data technologies including the World Wide Web (WWW), electronic data interchange (EDI) and Extensible Markup Language (XML)³ can speed the process of business transactions and reduce the amount of manual processes required. The WWW is a very effective vehicle for publishing documents.

Electronic mail is in sporadic use within the Commonwealth and can be used more effectively for communication reducing the production of paper documents. Electronic forms hold the promise of additional opportunities to reduce the amount of paper being collected and processed. Electronic forms also increase the accuracy, and may increase timeliness of the data.

4.1.3 Principle 3: Treat Information as a Strategic Resource

Information is a critical asset of, and owned by, the Commonwealth Justice Community. It must be managed from an enterprise perspective to ensure accuracy, integrity, and availability. This includes developing a methodology or structure for sharing data across functional, technical, and organizational boundaries. Agencies and departments act as custodians or stewards of the data and facilitate the sharing and reuse of the data. Only the data necessary to support the business objective should be collected. Data should be collected once and used many times. Duplication increases the likelihood of erroneous data and of having different values for the same piece of data.

4.1.4 Principle 4: View Technology Investments from an Enterprise Perspective

Technology investment decisions should be made from an enterprise perspective and not that of a single cabinet or agency. An enterprise-wide focus is necessary to ensure that the Commonwealth's limited IT resources are being utilized in the most effective manner. Many major business processes within the criminal justice community cross two or more cabinets. A strong technology infrastructure is required to support enterprise-wide applications as well as cabinet and agency-specific projects.

A strong IT architecture and standards are required to ensure the interoperability, compatibility, and shared usage of technology resources. The architecture and standards provide a foundation for building IT applications.

4.1.5 Principle 5: Ensure Electronic Access to Information and Services while Maintaining Privacy

Information is of little value if access to the information is not readily available. Providing efficient electronic access to information requires a strong infrastructure and a standard set of navigation methods and tools. Providing access to information is often a double-edged sword. Kentucky must balance the need for easy access to information against the privacy and security requirements of the information.

4.2 Architecture Alternatives

Architectures fit into one of three major categories: consolidated, coordinated or hybrid. The differences concern themselves with how data is stored and accessed and the diversity of contributing agencies' systems. The more centralized the data effort and more common the equipment, the more consolidation makes sense. The less centralized the data and more diverse the input systems, the greater the need for a more hybrid system. **Exhibit 4-1** summarizes advantages and disadvantages and rates how each system architecture meets the UCJIS needs of the Commonwealth.

³ Extensible Markup Language (XML) is a national standard data tagging language

Exhibit 4-1: Comparison of Alternative Architectures

	Consolidated (Central Database)	Coordinated (Point-to-Point)	Full Hybrid (Combination)
Allows unique identification	High	Low	Medium
Retrieve information from other agencies	High	Low	Medium
Presents a singular, logical criminal history view	High	Low	High
Reduction of data entry points	High	Low	High
Data Accuracy and Integrity	Medium	Low	Medium
Effective and efficient enterprise-wide criminal justice business process	High	Low	High
Data access at point of need	High	Low	High
Appropriate Data Stewardship	Low	High	High
Extensible, scalable and interoperable	Low	Low	High
Level of Security	High	Low	High
Organizational fit	Low	Medium	High
Solves immediate problems	Low	High	High
Amount of business process reengineering required	High	Low	Medium
Level of Risk	High	Low	Medium
Time to implement	High	Low	Medium
Impact on existing operational systems	High	High	Medium

4.3 Recommended Commonwealth of Kentucky Integration Architecture

The Full Hybrid Architecture was selected as the solution that best fit the needs of the Kentucky UCJIS. The two principle components of this hybrid architecture are:

1. A central system that controls the flow of information from one system to another
2. A central repository for cross agency information

This selection permits a variety of technology approaches to be used so justice entities may join the integrated system employing either small, incremental technology solutions, or entire system replacements. Each agency may maintain its own operational systems, receive critical information from other agencies, and allow queries to a central repository. This approach allows agencies to maintain their individual data, but also share information with each other as well as a central database. This database is supported by a single agency responsible for the integration mission. The central repository provides a resource for inquiry/reporting and serves as an alternate source of data from which interested agencies can retrieve information.

Of note, this architecture has not been tried on a large scale in other criminal justice agencies in the United States. Kentucky would be the first to adopt it. Many states are just beginning to investigate integrated justice. Most have developed their own unique justice structure and have adopted technologies at different speeds and different directions. Additionally, NASCIO, the accepted standards board for UCJIS, document exchange architecture has only recently been published and distributed to the community for review and comments. The technologies employed in this full hybrid architecture are not new nor is their combination new in industry. While Kentucky would be the first to adopt this methodology, little, if any, technology risk exists. The Project Team factored all of these considerations into the selection of the full hybrid architecture and is confident it will succeed in the Commonwealth.

Exhibit 4-2 depicts a high level view of the recommended Kentucky UCJIS Architecture. The remainder of this section describes its components.

Note: Exhibits contained in this document include only a few of the anticipated justice entities. These samples were provided as a subset of the actual participants to simplify the diagrams.

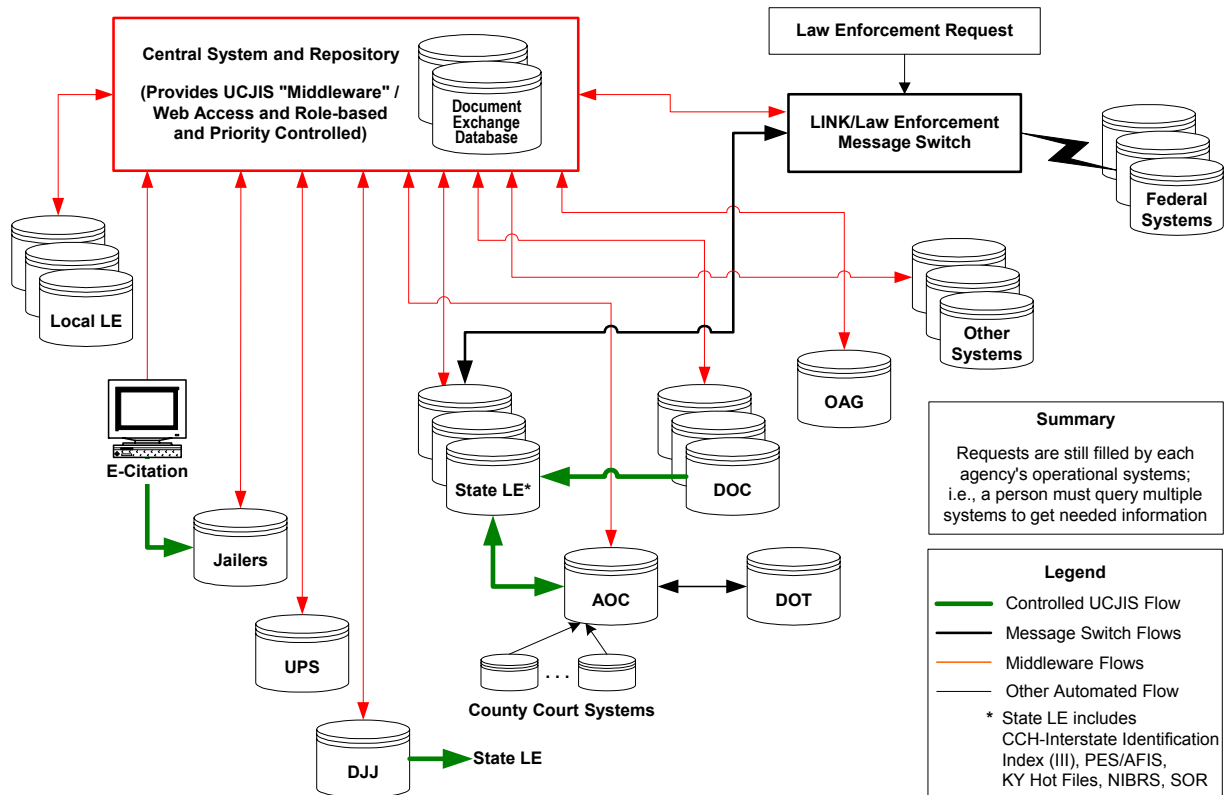


Exhibit 4-2: Recommended UCJIS Architecture

4.3.1 Critical Component 1 – Central Control

The Document Exchange Architecture is the primary method for the controlled exchange of justice information between entities (agencies) and stakeholders (people). It is an approach based on sharing dynamic, structured information under controlled circumstances. Dynamic data, subject to change and update during the normal course of business, may be arrest, wanted person or parole status reports. Structured means the data is rigorously defined rather than appearing in free text; i.e., a date of birth in a standardized format. Adopting this core architecture provides several advantages:

- **Flexibility** – Individual justice entities can utilize software best suited for their needs. They must simply add-on a data extraction and import layer to support the document exchange architecture.
- **Immediate, Lowest-Cost Participation** – Individual justice entities need not acquire new systems to participate. They can employ one of a variety of strategies described in this plan to support it.
- **Maximum Immediate Benefit** – This approach immediately addresses the most serious problems associated with system integration – duplicate data entry, reduced data quality and reliability, access to critical data already available on other systems.
- **Roadmap for the Future** – The Commonwealth may specify the exact requirements necessary for data exchange for all future system procurement and enhancement. A firm requirement of any future RFP for system enhancements or replacements will simply specify

the types of documents, data elements within the documents, and the XML data exchange standard as part of the procurement requirements.

Document Exchange requires two major process steps:

1. Enabling the data extraction and preparing the document to be exchanged
2. Transporting the document

4.3.1.1 Enabling Data Extraction and Preparing the Document to Be Exchanged

There are two principle approaches for enabling the document exchange. One requires the modification of legacy software and the other assumes the introduction of a new gateway or middleware application to prepare the document to be exchanged. It is likely that a combination of these approaches will be used, as different agencies will have different methods for integrating with the UCJIS Architecture.

4.3.1.2 Transporting the Document

Transportation of the documents defined by the document exchange method between systems can be accomplished in a variety of ways. The method selected will depend on the capabilities of the systems and the resources available to enable the transfer of information. The four principle methods for the transportation of documents between systems are:

- Peer-to-peer communication
- Shared folder storage and polling
- E-mail encapsulation
- Store and Forward Server/Agent

4.3.2 Critical Component 2 – Data Repository

While the document exchange solution can provide immediate value for both data entry and standard data viewing needs, it does not provide access to the variety of data needed to answer questions that are more complex or requirements in the area of ad-hoc queries or report generation. Therefore, a separate data storage component needs to be provided which can quickly and efficiently receive data from the operational systems for storage. The UCJIS architecture addresses this using one or more of the approaches listed below.

- Document Exchange Store and Forward Information
- Data Integration Middleware
- Import/Export processing

4.3.2.1 Document Exchange Information Hub (Store and Forward)

The principle function of the UCJIS server computer will be to provide the document exchange hub component of the architecture. This server will provide the repository containing the definitions for all documents that can be exchanged. It will manage the receipt and distribution of documents from the provider of the information to all entities to receive the document. Functionally the server will act as a switch, routing requests and responses (both generically called *documents*) based on message priority, requester/submitter role(s), and any business rules associated with a particular document exchange.

The document exchange information hub will, with appropriate security and business logic, open the documents and add or update the data contained in the data repository database.

4.3.2.2 Data Integration Middleware

An additional component of the UCJIS is the incorporation of data integration middleware. Data integration middleware would be used to extract data from operational systems on a timely basis and store that data on the repository. Real-time access to critical data on operational systems is provided by the document exchange (query/response) mechanism.

4.3.2.3 Import/Export Processing

Finally, Import/Export processing would be utilized to manage scheduled data movement among legacy systems where document exchange and middleware solutions are too costly to implement.

4.4 Information Technology Enterprise Standards

To ensure consistency among the justice agencies and other agencies within the Commonwealth, implementation of the UCJIS architecture must follow the Commonwealth of Kentucky's Enterprise Standards. A wealth of information is available at the web site contained in the box on the right. Key standards deal with software, hardware, network, and data architecture.

Information Technology Enterprise Standards

- Application Architecture
- Hardware Architecture
- Network Architecture
- Data Architecture

<http://www.state.ky.us/kirm/arcstand.htm>

4.4.1 Application Architecture

The Commonwealth standard for application development recommends that both two-tier and three-tier client/server architectures are appropriate as application architectures. Both of these application architectures are supported by the UCJIS architecture.

4.4.2 Hardware Architecture

Enterprise Computing Platforms Architecture provides the class and strategic configuration of computing platforms (field portable, desktop, local-server, regional-server, central-server, and traditional mainframe) that will be deployed and configured to support the Enterprise Applications Architecture and the Enterprise Data Architecture. The UCJIS architecture is flexible enough to allow different computing platforms. However, the reference should be reviewed before purchasing any computing platforms.

4.4.3 Enterprise Network Architecture

While the other architecture standards will ensure interoperability across hardware and operation system platforms, a standard network protocol will ensure compatibility across the network. The Commonwealth Enterprise Architecture outlines TCP/IP as the network protocol of choice.

The Governor's Office for Technology is currently deploying a statewide LAN/Wide Area Network (WAN) as the foundation of its Enterprise Network of the future. The network is the foundation that supports all other system components. Upon full deployment, the network will provide the Commonwealth Justice Community with a TCP/IP compliant network environment. All other system components will utilize this network and the TCP/IP protocol to support their communication services.

The network will be the most important element of the information technology infrastructure. Without this infrastructure, it will be impossible to fully implement the UCJIS architecture.

4.4.4 Enterprise Data Architecture

This component defines the type of enterprise data structure and open systems standards that will guide the development of all new Justice business applications. The Commonwealth Enterprise Architecture outlines two data architecture technologies: Data Warehousing and RDBMS. The UCJIS architecture not only supports the use of both of these technologies but is also a crucial part of the recommended UCJIS architecture.

5.0 SECURITY

Confidentiality, integrity, and availability of government and corporate information assets are at higher risk now than ever before. There are several reasons for the increased risk. First, the technology levels in information systems continue to grow in complexity. This increasing complexity makes the job of securing the IT infrastructure more difficult. Second, the number of attacks on IT systems is increasing in complexity and frequency. As more individuals become computer literate, increasing numbers of unauthorized users will attempt to hack into networks or release new forms of malicious code into public domains. Third, security of information assets continually lags behind the technological advances of computer hardware, software, and LAN topologies. The need for an information security program is evident. Kentucky's new Security Guidelines Document of January 2001 provides an excellent source document for security awareness and practice. The purpose of this section of the UCJIS Strategic Plan, therefore, is to build on the Kentucky document and enhance the security program. The sections that follow articulate the components of that program. These components represent a comprehensive approach that is based on years of experience in government and corporate IT environments. While there are no guarantees that a completely secure UCJIS environment can be established and maintained, the basic steps laid out here will significantly reduce the potential for loss, compromise, or destruction of sensitive and valuable data.

5.1 Security Self Assessment

Before proceeding with the establishment of a comprehensive security program, it is necessary to understand the baseline upon which the security program can build. We must understand the UCJIS system functionality, the operation of the UCJIS environment, the practices and procedures that are in place, the corporate culture, and the threats and vulnerabilities that will be the focus of our security energies.

Self-assessment may be performed using a variety of techniques, including documentation reviews, interviews, and testing using penetration testing and analysis tools to search for system weaknesses. The output of a security assessment will be an assessment document that describes the security posture of the assessed systems, and most importantly, lays out an action plan for implementing the security program.

Once the baseline is established, the work of putting an effective security program in place can occur. For organizational purposes, we have structured the approach to security self-assessment in the context of management controls, operational controls, and technical controls. These categories have been derived from various sources, most principally documents produced by the National Institute of Standards and Technology (NIST). Once the self-assessment is completed, the three categories provide the structure for the UCJIS security program.

5.2 Management Controls

The UCJIS security organization will serve as a structure within which the security policy of the organization can be effectively implemented. This organization will reside within the UCJIS governance body structure and may be delegated to a UCJIS-related group responsible for the security of the UCJIS network and whose systems responsibilities reach across all UCJIS technical environments. The security organization will be responsible for the definition of controls, and the assignment of responsibility to individuals to carry out security responsibilities. These responsibilities extend from management through the security structure and encompass management, operational, and technical controls. Security roles exist for senior management, central security managers, system and application managers, and users.

At its highest level, management controls exist to execute the risk management program. The components of that program are to identify risk (including threats, vulnerabilities, and countermeasures), mitigate any risk for which it is cost-effective to do so, and manage any residual risk. Residual risks exist as a conscious decision on the part of management to accept those risks that cannot feasibly or cost-effectively be mitigated.

Once risk is identified, a Security Plan is put into place to codify the security organization, roles and responsibilities, relationships, and to specify how the security policy will be implemented. Implementation encompasses all aspects of the security program, including risk management, recurring schedules of security-related activities (e.g., security testing and periodic certification activities), and security awareness, education, and training. The Plan will also assess the processes employed to respond to security incidents (e.g., virus or hacker attacks).

Management controls also encompass the creation and maintenance of security documentation. Documentation must evolve as the systems themselves evolve. Security documentation includes the following: Security Policy, Risk Assessment, Security Plan, Security Test Plan(s), Security Procedures, and Contingency Plan.

5.3 Operational Controls

In the hierarchy of security controls, operational controls reach broadly over the entire UCJIS computing environment. However, they specifically relate to the systems themselves. Responsible persons as specified in the Security Plan direct operational controls to support the security posture of the entire organization's IT assets. NIST Special Publication 800-12, *An Introduction to Computer Security*, call out the following categories that fall under operational controls:

- Personnel/User Issues
- Preparing for Contingencies and Disasters
- Computer Security Incident Handling
- Awareness, Training, and Education
- Computer Support and Operations
- Physical and Environmental Security

The implementation of a sound security program for UCJIS would require attention in each of those areas.

5.4 Technical Controls

Technical controls provide a line of security defense at the system level. The most common technical controls include Identification and Authentication, Logical Access Controls, and Audit Trails. In the case of UCJIS, both the existence and effectiveness of technical controls, or quite possibly the absence of needed controls, will be identified during the security assessment.

5.5 Privacy

Along with the security of the network and the security of the information within the network is the development of a comprehensive Privacy Policy to clearly identify the limits of information distribution. Often is the case where someone presents a logical argument to why information should be made available to the public, to a government entity or to a specific agency within the government. As with the limits on information distribution for juveniles, the Commonwealth of Kentucky will be faced with an additional challenge as criminal, law enforcement and justice related information begins to be more readily accessible throughout this architecture. The Legislature of the Commonwealth must carefully examine the information to be made available and the privacy issues

that may surround its distribution balancing the logical argument for a government agency's need for information versus the rights of privacy of the subject.

6.0 RISKS TO SUCCESS

This section provides a discussion of some issues that present a considerable risk to the UCJIS Strategic Implementation. These risks are presented within this Strategic Plan to raise awareness of significant issues and to ensure that the Commonwealth plans for, and takes the necessary steps to address the issues and minimize the potential impact of these risks.

6.1 Agency Participation and Cooperation

Perhaps the greatest risk to the entire project lies in the area of inter-agency cooperation and participation. For this effort to succeed, an extraordinary level of cooperation is required among all parties. Given the vastly different interest areas of the players, in addition to their formal separation (executive, judicial, and legislative) it is strongly recommended that a governing body be formally established to govern the UCJIS effort. This recommendation is discussed more fully in Section 3.

6.2 Keeping Technology in Perspective

Across the various agencies, there is a need to leverage information technology tools to expand business capabilities, capitalize on current trends in business today, and move forward with business-to-customer (B2C) services. However, it must be understood that technology must not be allowed to drive the solution; rather, the solution will define the technology to be employed. To do otherwise would put the success of the program at risk.

Thus, technology, per se, is not the answer. The smart introduction of enabling technologies is the answer. The Commonwealth is presented with a real opportunity to introduce progressive technology to criminal justice agencies, thus enhancing their ability to provide their specific services and bringing them in line with current industry standards. For example, in the interest of eliminating the widespread use of paper forms and improving turnaround time for agency documents, automated case management and electronic records management should be introduced. Agency web sites should promote the use of downloadable forms and leverage the site as a business tool.

The use of these new technology tools will involve change management efforts and the development of training initiatives to optimize employee use of the tools. The UCJIS solution set must encompass enabling technologies that help people do their jobs, not get in their way.

6.3 Schedule, Technical, and Funding Risks

These three risks are discussed together in this plan because they all share two common attributes:

1. All are largely outside the control of the UCJIS Program Office and/or the participating agencies
2. All of them can be mitigated to some degree by smart program management

At first glance, these two attributes might seem to be contradictory, but they are not. Risk is a fact of all complex programs (attribute 1) and risk management (attribute 2) is an essential function of all successful program offices. The UCJIS Program Office would also do well to involve the IPT in identifying risk management strategies.

Schedule risk exists in any project, especially one involving numerous agencies and numerous efforts over a multi-year horizon. Any number of factors can adversely impact the program schedule, the most common being the following:

- Sporadic or insufficient funding
- Poor planning

- Loss of a key team member
- Insufficient infrastructure
- Change in direction or lack of support from senior leaders
- Late deliveries from vendors

As planning begins on the UCJIS Strategic Implementation, the Governance body of the project must be aware of the dependencies of various projects and the critical path within the high-level project plan that will impact success and the ability to achieve targets and milestones. Failure to focus on priorities and critical path efforts will result in delays and possible project failure. The project schedule must receive timely and repeated attention.

Technical risk is present in any development effort. However, the Project Team believes technical risk for the UCJIS Program is minimal. This is because the Project Team recommends heavy reliance on procuring COTS products from established vendors to the maximum extent possible. The integration and customization efforts that will be required to employ COTS products are all within the scope of proven technologies with little development risk.

Funding risk is always present. Funding in the proper amounts and at the proper time is the lifeblood of this project. Recognizing this, the Project Team will identify program-funding requirements as early in the program as possible to enable the UCJIS Program Office to properly build its budget. Sponsoring management and legislative personnel must be prepared to provide UCJIS funding as a steady stream. This Strategic Plan identifies initiatives that will require funding over several years. UCJIS is not a stopgap or quick solution to Justice and Law Enforcement issues. It is a strategic effort that incorporates business process and technical changes, as well as the introduction of new technology. These improvements come at a cost that should be well planned and budgeted for over a course of time that exceeds the current planning timeframes. These improvements position the Commonwealth to take advantage of technical opportunities for a period that may extend out as much as ten years or more.

7.0 PERFORMANCE MEASUREMENT PLANNING

7.1 UCJIS Performance Plan

Measuring performance within an organization is important primarily because it allows leaders to *manage for results*. Managing for results focuses an organization on its mission, goals, and objectives. Performance measures establish the accomplishment of these goals and objectives as the primary endeavor for the organization, and performance measures reporting provides managers with the information needed to assess the degree of success the organization is having in accomplishing its mission, goals, and objectives. Performance measures are also used to gauge how well an organization is doing in terms of its goals and objectives, and this is becoming increasingly important for both private and public organizations. In the case of the UCJIS project, performance measures will be used to focus efforts on the achievement of the UCJIS Vision Objectives. This performance plan is a roadmap, stating in very broad terms the steps UCJIS must take in developing its performance measurement system.

Within this section, the Project Team defines the recommended performance plan for the UCJIS project. This plan uses the Performance Measurement Method (PMM). The PMM guides the development of a balanced set of performance measures, referred to as a Balanced Scorecard,⁴ and identifies the steps to be used in doing so. The Project Team views this process as the most comprehensive and effective manner to define, establish, and measure performance metrics.

7.2 Overview of the Balanced Scorecard

In most traditional private and public sector organizations, there has always been a focus on measurements of the bottom line: financial data. While financial data are precise and objective, they fail to tell the whole story of an organization's health. The Balanced Scorecard approach seeks to align strategy with action and to assess the effectiveness of strategies and processes. Performance is measured via several perspectives, thus giving a "balanced" approach. The four quadrants of performance metrics⁵ are shown in **Exhibit 7-1** and identified below.

1. **Financial Perspective** – This perspective focuses on cost efficiency and delivering maximum value to the customer for each dollar spent. In the Commonwealth, this may include measures to ensure that budgetary targets are delivered, the UCJIS cost base is being managed, and that the project investment is being optimized.

Generic example measurements would include:

- Agency manpower cost outlay, referred to as "Full Time Equivalent outlay," associated with a particular process e.g. Jail manpower expenditures associated with booking process
- Cost avoidance using technology – that is, for example, the cost benefit derived from the use of live-scan technology and the implementation of an e-citation

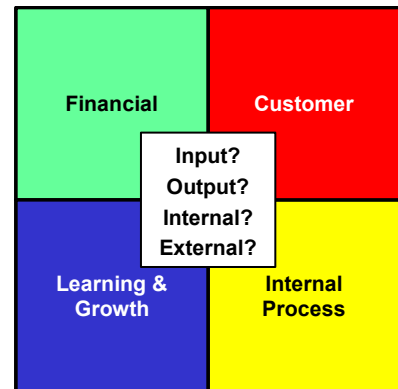


Exhibit 7-1: The Balanced Scorecard Quadrants

⁴ Dr. Robert Kaplan and Dr. David Norton, "Translating Strategy into Action: The Balanced Scorecard"

⁵ Based on titled "Balanced Scorecard Performance Measurement and Performance Management Program for Federal Procurement and Contractor Purchasing Systems," Department of Energy

- 2. Customer Service Perspective** – This perspective captures the ability of the organization to provide quality goods and services, effective delivery, and overall customer satisfaction. For UCJIS, the focus may be to ensure the creation of long-term customer relationships, to create “best in class” agencies according to their various service offerings, and to ensure the highest levels of customer care.

Customers to the UCJIS project would include:

- The various criminal justice agencies and their employees
- The Commonwealth government
- The public

Generic example measurements would include:

- Percentage of information requests from the public fulfilled within required timeframe
- Percentage of agency personnel satisfied with the accuracy and timeliness of data presented through a specific system. For example, the percentage of KSP employees satisfied with the timeliness of the Criminal History information retrieval process

- 3. Learning and Growth Perspective** – This perspective captures the ability of employees, information systems, and organizational alignment to manage the business and adapt to change. In the Commonwealth, the focus may be to develop skills necessary to deliver long-term and sustainable success such as computer literacy among agency personnel, proficiency in agency information systems, and digital fingerprinting expertise among those responsible for that activity.

Generic example measurements would include:

- Percentage of employees who complete the required level of job-specific training – For example, the percentage of DOC employees trained in the use of the agency-established word-processing software

- 4. Internal Process Perspective** – This perspective provides data regarding the internal business results against measures that lead to financial success and satisfied customers. To meet the organizational objectives and customers’ expectations, organizations must identify the key business processes at which they must excel. In the case of UCJIS, this may include measures to ensure that the agency business processes add to customer value, that the highest standards of public security are achieved and maintained, and that the UCJIS agencies employ best business practices.

Generic example measurements would include:

- Number of intrusions to a particular agency system identified by security software
- Number of hits on agency web site
- Percentage of time that recovery systems are used to restore key systems
- Average number of seconds it takes for a system to respond to a user’s transaction

Effective performance measurements for UCJIS must be designed within the context of the UCJIS vision. In addition, they must fit the following criteria:

- *Controllable* – The results are substantially in the hands of the organization, minimizing the effects of external factors
- *Concise* – The measures must be succinctly stated and easily understood
- *Timely* – The measures must be frequently-available indicators of performance

- *Accurate* – The measures should be reliable, sensitive indicators of performance
- *Cost Effective* – The measures must provide data that is worth its cost of gathering

In addition, the capture of these measurements should be automated, if possible.

UCJIS can develop a set of measures derived from strategies, goals and objectives that represent a tool for project leaders to use in communicating strategic direction and for motivating change. These same measurements will form a basis for criminal justice agency leaders in the Commonwealth to plan, budget, structure an organization, and control results. This tool, as part of the PMM, also considers balance across the value chain, stakeholder groups, and employees. The PMM uses a cumulative phased approach to building a performance organization, and this is discussed in the next section.

7.3 The UCJIS Performance Plan: Phases

7.3.1 Phase A – Enterprise Overview

Phase A requires the establishment of a foundation for the UCJIS performance organization, based on an understanding of the existing business environment including:

- UCJIS Vision
- Strategies
- Critical Success Factors
- Criminal Justice Agency business processes (UCJIS member agencies)
- Existing usage of performance measures (PMs) assessed to provide a basis for defining an improved PM set

Once the background information about the project and the individual organizations is obtained, it is reviewed. The specific organization drivers are then examined within the context of the UCJIS mission and objectives. This high-level understanding of the UCJIS member agencies' business and operating environment is then presented in the form of an Enterprise Overview.

7.3.2 Phase B – Developing the Performance Strategy and Design Principles

While developing the Performance Strategy and Design Principles, the focus of the effort concentrates on identifying the performance direction for UCJIS, and designing the assessment models to be used to accomplish the performance objectives. Strategic direction may be set through a series of high-level visioning sessions with UCJIS and member agency leaders, during which a mapping of project mission to goals to objectives to desired performance levels occurs, with increasing levels of specificity. In this regard, it may be necessary to conduct Performance Measurement orientation for project and agency leaders, in order to communicate the importance of PMs as a management tool used to shift leadership perspectives from prescriptive, audit and compliance-based oversight to forward-looking strategic partnerships among member agencies.

7.3.3 Phase C –Developing the Framework for Current Performance Measurement Assessment

At this point, the focus shifts to develop a PM framework for assessing the current PM usage within UCJIS and later for defining a new PM set. The framework ensures that the PMs support the project's business strategy, and is used to complete an assessment of the current PM usage at the member agencies. A PM framework is developed from two primary perspectives:

1. *Strategy perspective* – The framework must link PMs to the UCJIS strategies. This is accomplished by aligning performance measures with UCJIS’ strategies and Critical Success Factors
2. *Process perspective* – The framework must be comprehensive and encompass all relevant business processes of the UCJIS member agencies. The value chain technique is used in the methodology to view UCJIS as a series of processes in the life cycles of the Commonwealth’s criminal justice system

An example of a performance measure currently in use within the Commonwealth is shown in **Exhibit 7-2**. This performance measure, and others currently in use within the Commonwealth, will serve as the starting basis for the design of the new PM system.

Exhibit 7-2: Example Format – Existing UCJIS Performance Measures

Agency	ID	Performance Measures	Stakeholder Group	Component of Balanced Scorecard	Performance Target	Current Performance Baseline	Measurement Tool	Vision Objective
KSP	1	Number of mistaken-identity arrests	UCJIS Committee, KSP, Public	Customer, Internal Process	Zero mistaken arrests	To Be Decided	Jail Management System- generated report	Unique Identification

7.3.4 Phase D – Transition Stage

This stage focuses on leveraging existing technology in the collection of performance data, or the identification of information technology to potentially do so in the future. It may involve:

- The development of an enterprise-wide PM system as an integral part of a broader initiative such as the UCJIS wireless communications infrastructure
- The installation of additional equipment or processes to capture data in a timely and accurate manner
- Making the PM project a part of an organization’s initiative to upgrade its information systems to provide timely and relevant information to management
 - » Constructing the PM system in this manner may be a part of a major IS project which may involve developing the supporting data collection systems, management information reporting systems and data warehousing systems
- Deciding that the PM system is manually driven or spreadsheet-based and does not involve any major IS development effort.

7.3.5 Phase E – PM Implementation

During implementation, new PMs are reviewed by the PM champions of UCJIS and incorporated into the business process at selected prototype sites for testing. The new performance measures are validated, data collection is started, and the sites begin to report on the measurements, on a regular basis as defined. The reporting of PMs within agencies must be coordinated, so that all the agency-specific PM reports may be distilled for publication at the project level, in order to gauge the performance of UCJIS as a whole.

7.3.6 Phase F – PM Reassessment and Corrective Action

As business strategies change, measures should be continuously added or eliminated to improve the effectiveness of the PM system. As part of the performance measure Reassessment and Corrective Action phase, measurements are reviewed and refined as necessary, on an ongoing basis. Therefore, as UCJIS expands in scope, its measurement change process should coincide with the business

planning cycle. In addition, as efficiencies are improved at the member agency and Commonwealth level, the performance standards must be reassessed to ensure continuous improvement. The measures should be evaluated annually or earlier, as appropriate. In addition, effort should be made to keep intact a semblance of the implementation team to provide continuity, consistent measurement guidance and to manage the change process.

8.0 CONCLUSION

The Commonwealth embarked on a challenge in 1998 to develop a single, flexible information system to support all levels of criminal justice professionals throughout Kentucky. This effort produced a vision of a secure, efficient, electronic system, containing accurate, up-to-date, nonredundant criminal history information both produced by and readily available to appropriate criminal justice community members. This Vision has now been validated, and backed up by vision objectives developed over the past several months to provide a focus for further efforts to bring this vision to reality. When satisfied, these vision objectives will mark the success of the UCJIS effort.

The vision objectives have been further refined into six strategic goals; actionable efforts designed to meet the vision objectives. They are structured such that any single one will contribute to the satisfaction of more than one vision objective. These goals include establishing single points of data capture, employment of unique identifiers for criminals, development of a justice-wide communications network, selection and installation of an appropriate UCJIS architecture, implementation of mission critical applications, and streamlining business practices for efficiency.

The goals are supported by several strategic initiatives and enablers that will facilitate their attainment. The initiatives provide the necessary highway to success, while the enablers provide a few opportunities to realize early, visible successes that will provide a catalyst to the overall UCJIS effort.

Phases have been roughly established to provide a general guide for implementation. The first, or Set-Up Phase, addresses the organization, planning, change management, and performance measurement planning of the UCJIS effort, and the commencement of the strategic initiatives and enablers. The second, or Development Phase, focuses on infrastructure and architecture and the further progress of strategic initiative and enablers. The third phase, concerned with Sustaining Operations and Future State, finalizes the introduction of new technologies and brings other, newer, available technologies to bear on the project. It is also the phase associated with watching for opportunities to capitalize on the future of technology and its application for UCJIS.

This Strategic Plan is one of a continuum of planning and implementation documents developed to help put in place an effective, efficient Unified Criminal Justice System for the Commonwealth of Kentucky. It lays the foundation for a successful UCJIS effort that will benefit the key agencies enrolled in the UCJIS project as well as many others. Eventually, it will encompass agencies such as victim's advocates, Department of Transportation, Cabinet for Families and Children, and other indirect UCJIS agencies.

A significant investment of Commonwealth time and money has been made to support the overall planning process. Interviews, visitations, and information gathering meetings have been held throughout the Commonwealth to build the best UCJIS plan possible. This process, however, is only as beneficial as the management infrastructure allows it to be. No portion of the present criminal justice system is left unaffected significantly by this plan. Changes, and in some cases, major changes to the way business is presently conducted must be made. Each agency is dependent upon the other to make this plan work. It cannot be overemphasized that the governance structure put in place to support UCJIS will be the deciding factor in its success or failure. The UCJIS program must be provided the funding and authority to make the plan a reality.

The Commonwealth has taken a major step forward in the unified criminal justice arena. The vision is in place, goals set, and an architecture recommended. Now, throughout all agencies, the human and financial resource commitment must be made that will allow a systematic implementation of this plan and result in an efficient UCJIS business process, supported by nearly seamless technology. When

this is completed, the Commonwealth of Kentucky will have become a genuine leader in the field of unified criminal justice.

Appendix A Acronyms and Abbreviations

AFIS	-----	Automated Fingerprint Identification System
AOC	-----	Administrative Office of the Courts
B2C	-----	Business to Customer
BPR	-----	business process reengineering
CCH	-----	Computerized Criminal History
COTS	-----	Commercial-Off-The-Shelf
CHRIS	-----	Criminal History Records Information System
DJJ	-----	Department of Juvenile Justice
DOC	-----	Department of Corrections
DXA	-----	Document eXchange Architecture
e-citation	-----	Electronic citation
EDI	-----	Electronic Data Interchange
e-mail	-----	Electronic mail
EMS	-----	Emergency Medical Service
FBI	-----	Federal Bureau of Investigation
GIS	-----	Geographical Information Systems
GOT	-----	Governor's Office for Technology
GPS	-----	Global Positioning System
IDMS	-----	Intelligent Document Management Solutions, Inc.
IPT	-----	Integrated Project Team
IT	-----	Information Technology
IJISIWG	-----	Integrated Justice Information System Industry Working Group
JMS	-----	Jail Management System
KIH	-----	Kentucky Information Highway
KSP	-----	Kentucky State Police
KY	-----	Kentucky
LAN	-----	Local Area Network
LEA	-----	Law Enforcement Agency
MCD	-----	Mobile Computing Device
MDT	-----	Mobile Data Terminals
NASCIO	-----	National Association of State Chief Information Officers
NIST	-----	National Institute of Standards and Technology
OAG	-----	Office of the Attorney General
PCD	-----	Personal Computing Devices
PERT	-----	Program Evaluation and Review Technique

PM----- Performance Measures
PMM----- Performance Measurement Method
PSWAC ----- Public Safety Wireless Advisory Committee
PwC ----- PricewaterhouseCoopers LLP
RDBMS ----- Relational Database Management System
SAIC ----- Science Applications International Corporation
SAS----- Strategic Alliance Services
SID ----- State Identification Number
UCJIS----- Unified Criminal Justice Information System
UPS----- Unified Prosecutorial System
WAN----- Wide Area Network
WWW ----- World Wide Web
XML ----- eXtensible Markup Language

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